

The Project 25 Consolidated Communications Network of Colorado (CCNC) proves to be a Game-Changer for multi-agency coordination as well as preserving life safety during the recent 2020 wildfires in the state.

By: Sheriff Justin Smith, Larimer County Colorado



Background

Nearly a quarter of century ago, Colorado began down a path to establishing statewide public safety radio interoperability through a state and local partnership that is grown into the Consolidated Communications Network of Colorado (CCNC).

The concept was initially discussed at a state sponsored forum in 1992, but at that point, it was merely conceptual thinking. By 1996, a memorandum of understanding was signed by three Denver metropolitan counties and the second largest city in the state to interconnect their current radio systems. Between 1997 and 1999, Jefferson and Douglas Counties (which border the west and southwestern portions of the Denver metro area) installed and APCO 16 standard, combined digital trunked radio system with 8 tower sites and 3,000 users.

The State of Colorado joined in and between 1999 and 2000, upgrading the system to the APCO 25 standard and created two separate zones to form what later became the statewide digital trunked radio system (DTRS). CCNC, as the managing authority of the system was incorporated in 2002 and the system has continued to improve and grow since then.



Colorado State-wide P25 System Profile

Today, the DTRS managed by CCNC contains 239 radio sites, connected under 5 separate zone controllers. With over 1,000 member agencies and upwards of 100,000 subscriber units on the system, the system facilitates over 9 million transmissions a month. The system covers most of the geographic area of the state, which is an amazing achievement given the magnificent Rocky Mountains that tower over the landscape from the southern to the northern border. Colorado is home 58 mountain peaks that exceed 14,000 feet.

Not only has the system allowed public safety agencies to communicate from nearly any portion of the state, but the system also includes separate mutual aid channels, divided into regions that assure interoperability of responders across the state.



Larimer County P25 interoperability During 2020 Wildfires

Larimer County sits along the Front Range Interstate 25 corridor on its eastern boundary and extends to the Continental Divide on its western boundary and is sandwiched between the Denver metropolitan area on the south border and Wyoming's capital city of Cheyenne on its northern border. Larimer County joined CCNC in 2005, instantly becoming interoperable in voice communications with the 2 largest communities in the county, the cities of Fort Collins and Loveland.

With shared talkgroup access between first responder agencies and several locally established mutual aid paths to facilitate regional shared communications, agencies across Larimer County have grown to depend on the communications made possible under the P25 standards.

However, beginning on August 13 of 2020, we tested the limits of the system and enjoyed the benefits of a statewide P25 system when we organized our response to the Cameron Peak Fire—a Rocky Mountain wildfire that over the following 3 months grew into Colorado's largest single wildfire on record.

While wildland fire crews remain reliant on more traditional repeated VHF radio systems, other responders relied on the statewide DTRS to assure consistent and reliable voice communications across the more than 200,000 acres of the fire.



Once the response grew beyond county-based agencies, Larimer County requested and received permission to secure a regional mutual aid channel (MAC) under the CCNC system. Having access to that MAC assured that any first responder agency in the state who sent resources could immediately be in communications with local resources without having to issue cache radios or reprogram radios brought by those first responders.

That capability proved a game changer for coordination as well as preserving life safety throughout the fire.

Assisting resources from around the state were advised of the communications plan prior to arrival and we able to communicate with Larimer County agencies seamlessly.

The resources brought into assist in law enforcement and security that were not in immediate communications were the Colorado National Guard as well as federal law enforcement officers brought in under the United States Forest Service. Thankfully, Larimer County has an in-house radio shop, staffed with 3 highly skilled technicians as well as a local cache of retired, but serviceable radios that were able to be assigned to Guard units and federal law enforcement officers assigned to the fire.

In almost every major incident or natural disaster, after action reports identify communications failures as a problem to be addressed. While there certainly were some lessons learned during this event, more importantly, we had many more successes confirmed with the utilization of the P25 system that blankets our state.

